



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,349	02/22/2000	Takashi Kurimoto	032590-049	2612

21839 7590 05/06/2003

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

HOM, SHICK C

ART UNIT	PAPER NUMBER
----------	--------------

2666

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/510,349

Applicant(s)

KURIMOTO ET AL.

Examiner

Shick C Hom

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/22/00, 4/21/00, 11/25/02, 12/16/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 17 is/are rejected.
- 7) ☒ Claim(s) 4,6-16 and 18-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-6. 6) ☐ Other:

Art Unit: 2666

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claims 1 and 3-27 are objected to because of the following informalities: In claim 1 line 3, claim 16 line 2 the word "datagrams" seems to refer back to "datagrams" recited in claim 1 line 2 and claim 2 line 2, respectively. If this is true, it is suggested changing "datagrams" to ---the datagrams---. In claim 1 line 6, the words "traffic information" seem to refer back to "traffic information" recited in claim 1 line 2. If this is true, it is suggested changing "traffic information" to ---the

Art Unit: 2666

traffic information---. In claim 1 line 7, the word "results" seems to refer back to "results" recited in claim 1 line 7. If this is true, it is suggested changing "results" to ---the results---. In claim 1 line 5 delete "said user's usage" and insert ---the user's usage---, because no user's usage have been previously recited in the claim. In claim 3 lines 2 and 3 and claim 6 line 2, the words "said datagram" seem to refer back to "datagrams" recited in claim 2 line 1. If this is true, it is suggested changing "said datagram" to ---said datagrams---. In claim 4 line 4, claim 6 lines 2-3, claims 7, 8, 9, 11 line 2, claim 10 line 3, claim 12 line 4, claim 13 line 1, claim 18 line 4, claims 19, 20, and 22 line 3, the words "a preference value" seem to refer back to "a preference value" recited in claim 2 line 6. If this is true, it is suggested changing "a preference value" to ---the preference value---. In claim 4 line 4, claim 14 lines 3 and 4, claims 19 and 20 line 2, claims 22 and 25-26 line 2, the words "a datagram" seem to refer back to "a datagram" recited in claim 4 line 2 and claim 18 line 2, respectively. If this is true, it is suggested changing "a datagram" to ---the datagram---. In claim 6 line 2, claim 18 line 5, the words "a header" seems to refer back to "a header" recited in claim 2 line 3. If this is true, it is suggested

Art Unit: 2666

changing "a header" to ---the header---. In claim 11 line 5, claim 14 lines 2-3, claim 15 lines 2-3, claims 19, 20, and 22-23 line 2 the words "a buffer memory" seem to refer back to "a buffer memory" recited in claim 4 line 7 and claim 18 line 7, respectively. If this is true, it is suggested changing "a buffer memory" to ---the buffer memory---. In claim 16 line 2, the words "an ascending order" seem to refer back to "an ascending order" recited in claim 11 line 4. If this is true, it is suggested changing "an ascending order" to ---the ascending order---. In claims 19 and 20 line 2, claims 21 and 23-27 line 4, claim 22 line 3, the words "a threshold value" seem to refer back to "a threshold value" recited in claim 18 line 4. If this is true, it is suggested changing "a threshold value" to ---the threshold value---. In claims 19 and 20 line 3, claim 22 lines 3-4, claim 23 line 2, the words "a received datagram" seem to refer back to "a received datagram" recited in claim 18 line 5. If this is true, it is suggested changing "a received datagram" to ---the received datagram---. In claim 23 line 3, the words "a buffer utilization factor" seem to refer back to "a buffer utilization factor" recited in claim 22 line 4. If this is true, it is suggested changing "a buffer utilization factor" to ---the buffer utilization factor---. In claim 23 lines 3-4

Art Unit: 2666

and 7, the words "an estimate" seems to refer back to "an estimate" recited in claim 22 line 4. If this is true, it is suggested changing "an estimate" to ---the estimate---. In claim 17 line 5, the word "datagrams" seems to refer back to "datagrams" recited in claim 17 line 1. If this is true, it is suggested changing "datagrams" to ---the datagrams---. In claim 17 line 5, claims 21 and 27 lines 4 and 5, the words "preference values" seem to refer back to "preference value" recited in claim 17 line 3 and claim 2 line 6, respectively. If this is true, it is suggested changing "preference values" to ---the preference value---. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made. This application currently names joint inventors. In

considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

Art Unit: 2666

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103[®] and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 5, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fijolek et al. in view of Hyziak et al. Regarding claim 1: Fijolek et al. disclose the traffic monitoring equipment including a traffic monitoring function for monitoring traffic information (col. 19 lines 38-46) relating to datagrams (col. 8 lines 1-7) that have been transmitted by a user to a network or datagrams that have been received from said network by said user during a specific time interval between a pre-determined earlier point in time and a current point in time (col. 13 lines 1-64), and storing monitored results (col. 9 lines 13-18 and col. 12 lines 56-67); the preference value computation function for evaluating said user's usage of communications, based on traffic information obtained by said

Art Unit: 2666

traffic monitoring function quantifying results of evaluation (col. 3 lines 35-41) and converting results of quantification to a preference value (col. 12 lines 35-42; col. 13, lines 1-12; and col. 18 lines 30-49).

Regarding claim 2: Fijolek et al. disclose the datagram transfer system (col. 8 lines 1-7) for receiving datagrams sent from a user terminal in a datagram transmission node and forwarding said datagrams to a destination address specified on a header of said datagrams (col. 8 lines 25-35) wherein an impact of said datagrams on network operation is evaluated by a traffic monitoring equipment (col. 19 lines 38-46) according to traffic information on said datagrams, evaluation results are quantified (col. 3 lines 35-41), and quantified results are converted (col. 12 lines 35-42; col. 13 lines 1-12; and col. 18 lines 30-49).

Regarding claim 17: Fijolek et al. disclose the method for performing prioritized transfer of datagrams (col. 13 lines 14-23) transmitted by users for being transferred through a network including the steps of evaluating an impact of transmitting a datagram on network operation (col. 19 lines 38-46); computing a preference value for said datagram to reflect evaluation result (col. 3 lines 35-41); and performing

Art Unit: 2666

prioritized forwarding of datagrams according to preference values computed for successive datagrams (Table 6).

Regarding claim 5: Fijolek et al. disclose the traffic information includes a length of a datagram or time intervals between transmissions of successive continual datagrams (col. 9 lines 41-52 and Table 3).

Fijolek et al. did not teach the preference value insertion function for inserting said preference value in a header of a datagram being processed at said current point in time as in claims 1, 2, and 17; the device for performing prioritized forwarding of the datagram according to the preference value specified in the header as in claim 3.

Hyziak et al. teach that it is known to provide the preference value insertion function for inserting said preference value in a header of a datagram being processed at said current point in time and the device for performing prioritized forwarding of the datagram according to the preference value specified in the header as shown in Fig. 3 in the field of digital and multiplex communications for the purpose of permitting sender of a transmission to elect message delivery via a network based upon cost to the sender, based upon relative levels of security, exhibits the fastest delivery (i.e., minimum

Art Unit: 2666

traffic load), and quality of service preference selection to control message delivery via that network that is best suited for the type of information being transmitted based upon network characteristics.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to inserting said preference value in a header of a datagram being processed at said current point in time including the device for performing prioritized forwarding of the datagram according to the preference value specified in the header as taught by Hyziak et al. to the system of Fijolek et al. The motivation for inserting said preference value in a header of a datagram being processed at said current point in time including the device for performing prioritized forwarding of the datagram as taught by Hyziak et al. to the system of Fijolek et al. being that it would provide the added feature of permitting sender of a transmission to elect message delivery via a network based upon cost to the sender, based upon relative levels of security, exhibits the fastest delivery (i.e., minimum traffic load), and quality of service preference selection to control message delivery via that network that is best suited for the type of information being transmitted based upon network characteristics.

Art Unit: 2666

Allowable Subject Matter

6. Claims 4, 6-16 and 18-27 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach the buffer enqueue control section for obtaining the preference value from a datagram received in the outgoing interface section and selecting priority datagrams to be transmitted successively in an ascending order to avoid traffic congestion including the other limitations found in claims 2 and 4. The prior art does not teach the use of a length field of the datagram provided in a header for inserting a preference value as in claims 2 and 6; the preference value computed based on an inverse of a difference between transmission times of one previous datagram and a current datagram, as well as on lengths of datagrams transmitted or received as in claims 2 and 7; the average rate computed for the preference value using a sliding window method based on a length of a datagram and time intervals between transmissions as in claims 2, 8, and 9; the difference computed between a number of

Art Unit: 2666

datagrams transmitted and a number of datagrams received being used as a preference value as in claims 2 and 10; and the back plane switch section for transferring datagram without causing internal blocking which include using a threshold value at a selected timing for obtaining a preference value and a judgment as to whether or not to transmit received datagram prior to entering the datagram in a buffer memory including the other limitations found in claims 2 and 18.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Davies et al. disclose an Internet differentiated services service for transaction applications.

Kalkunte et al. disclose an apparatus and method for generating rate control frames in a workgroup switch based on traffic contribution from a network switch port.

Art Unit: 2666

9. **Any response to this nonfinal action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick Hom whose telephone number is (703) 305-4742. The examiner's regular work schedule is Monday to Friday from 8:00 am to 5:30 pm EST and out of office on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao, can be reached at (703) 308-5463.

Application/Control Number: 09/510,349

Page 13

Art Unit: 2666

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

SH

April 29, 2003



DANG TON
PRIMARY EXAMINER